

CLAIMS

What is claimed is:

1. An apparatus for communicating between a first device and a second device, comprising:
a controller of the second device in communication with the first device; and
an industrial network coupled between the first device and the controller to facilitate communication between the first and second devices.
2. The apparatus of claim 1, further comprising at least one first input/output controller module of the first device in communication with the controller via the industrial network in order to facilitate communication between the first and second devices.
3. The apparatus of claim 2, wherein the at least one first input/output controller module communicates with the controller via at least one of DeviceNet, Ethernet, a SEMI specification defined network, or ProfiBus.
4. The apparatus of claim 3, wherein the first and second devices are semiconductor devices and the SEMI specification is SEMI E84.
5. The apparatus of claim 2, wherein:
communication between the first and second devices is via at least one of DeviceNet, Ethernet, a SEMI specification defined network, or ProfiBus; and
communication between the at least one first input/output controller module and the controller is via at least one of DeviceNet, Ethernet, a SEMI specification defined network, or ProfiBus.
6. The apparatus of claim 1, further comprising:

at least one first input/output controller module of the first device; and
at least one second input/output controller module of the second device, wherein the at
least one first input/output controller module communicates with the at least one second
input/output controller module via a SEMI specification defined network.

7. The apparatus of claim 6, wherein the communication between the at least one first
input/output controller module and the at least one second input/output controller module is via at
least one of DeviceNet, Ethernet, or ProfiBus.

1 8. The apparatus of claim 6, wherein:
2 the first and second devices are semiconductor devices;
3 the communication between the first and second devices is via at least one of DeviceNet,
4 Ethernet, a SEMI specification defined network, or ProfiBus; and
5 the communication between the at least one first input/output controller module and the at
6 least one second input/output controller module is via at least one of DeviceNet, Ethernet, a
7 SEMI specification defined network, or ProfiBus.

9. The apparatus of claim 1, further comprising at least one parallel input/output
interface coupled between the first and second devices.

10. The apparatus of claim 9, wherein the at least one parallel input/output interface
includes at least one optical data transmission device.

11. The apparatus of claim 1, wherein the first device includes an automated material
handling system and the second device includes at least one of a CMP device or production
equipment.

12. The apparatus of claim 1, wherein the first and second devices are semiconductor devices.

1 13. A method of communication between a first semiconductor device and a second
2 semiconductor device, comprising the steps of:
3 configuring the second semiconductor device to have a controller; and
4 providing communication between the first device and the controller via an industrial
5 network in order to facilitate communication between the first and second devices.

14. The method of claim 13, further comprising the steps of:
configuring the first semiconductor device to have at least one first input/output controller module; and
facilitating communication between the at least one first input/output controller module and the controller via at least one of DeviceNet, Ethernet, a SEMI specification defined network, or ProfiBus.

1 15. The method of claim 13, further comprising the steps of:
2 configuring the first semiconductor device to have at least one first input/output controller
3 module;
4 configuring the second semiconductor device to have at least one second input/output
5 controller module; and
6 facilitating communication between the at least one first input/output controller module
7 and the at least one second input/output controller module via the industrial network.

1 16. The method of claim 15, wherein:
2 communication between the first and second devices is via at least one of DeviceNet,
3 Ethernet, a SEMI specification defined network, or ProfiBus; and

4 facilitating communication between the at least one first input/output controller module
5 and the at least one second input/output controller module is via at least one of DeviceNet,
6 Ethernet, a SEMI specification defined network, or ProfiBus.

1 17. The method of claim 15, wherein:
2 the first semiconductor device includes an automated material handling system;
3 the second semiconductor device includes at least one of a CMP device or production
4 equipment;
5 facilitating communication between the first and second semiconductor devices is via at
6 least one of DeviceNet, Ethernet, a SEMI specification defined network, or ProfiBus; and
7 facilitating communication between the at least one first input/output controller module
8 and the at least one second input/output controller module is via at least one of DeviceNet,
9 Ethernet, a SEMI specification defined network, or ProfiBus.

18. The method of claim 13, further comprising the step of coupling at least one of
parallel input/output interface or optical data transmission device between the first and second
devices.

19. The method of claim 13, wherein facilitating communication between the first and
second semiconductor devices is via at least one of DeviceNet, Ethernet, a SEMI specification
defined network, or ProfiBus.

20. The method of claim 13, wherein:
the first semiconductor device includes an automated material handling system; and
the second semiconductor device includes at least one of a CMP device or production
equipment.

1 21. A method of communication between a CMP device and a second semiconductor
2 device, comprising the steps of:
3 manipulating an industrial network to facilitate a SEMI specification defined parallel
4 input/output interface between the CMP device and the second semiconductor device; and
5 facilitating communication between the CMP and second semiconductor device via the
6 industrial network.

 22. The method of claim 21, further comprising the step of facilitating communication
between the CMP and second semiconductor device via at least one of DeviceNet, Ethernet, or
Profibus.

1 23. A semiconductor system, comprising:
2 a first semiconductor device configured as a chemical mechanical polishing device having
3 at least one controller;
4 a second semiconductor device configured as a production tool having at least one
5 input/output controller module; and
6 an industrial network for facilitating communication between the at least one controller
7 and the at least one second input/output controller module.

 24. The semiconductor system of claim 23, wherein facilitating communication
between the at least one controller and the at least one second input/output controller module is
via at least one of DeviceNet, Ethernet, a SEMI specification defined network, or Profibus.